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Abstract

PURPOSE: To widen the self-stopping condition of Al on one-atomic layer or two-atomic layers by using hydrogenated alkyl aluminum as the raw gas of aluminum.

CONSTITUTION: A supporting member 2 is arranged in a reaction container 1, and a substrate 3 is placed thereon. The substrate 3 is heated up to the prescribed temperature by the heating device 4 provided on the outer circumference of the reaction container 1. Carrier gas and the opposite raw gas, consisting of hydrogenated alkyl aluminum $A R_m H_n$ (R is an alkyl radical, m and n indicate 1 and 2, and their sum is 3) as aluminum raw material, are introduced into the reaction container 1 by the valve 6 provided on an introducing tube 5, and the gases are fed on the substrate 3 which is heated up to the prescribed temperature. When the aluminum is used as above, the condition of gas which is hardly decomposed in the vapor phase and easily reflected on the surface is satisfied, and the self-stopping of growth under a wide growth condition can be realized.